

ATTACHMENT 1

LIST OF ABBREVIATIONS AND ACRONYMS

List of Abbreviations and Acronyms

2,4-D	2,4-dichlorophenoxyacetic acid
2,4,5-T	2,4,5-trichlorophenoxyacetic acid
2,4,5-TP	silvex
3D	3D International Environmental Group
AB	ambient blank
AbB3	Anniston gravelly clay loam, 2 to 6 percent slopes, severely eroded
AbC3	Anniston gravelly clay loam, 6 to 10 percent slopes, severely eroded
AbD3	Anniston and Allen gravelly clay loams, 10 to 15 percent slopes, eroded
Abs	skin absorption
ABS	dermal absorption factor
AC	hydrogen cyanide
ACAD	AutoCadd
AcB2	Anniston and Allen gravelly loams, 2 to 6 percent slopes, eroded
AcC2	Anniston and Allen gravelly loams, 6 to 10 percent slopes, eroded
AcD2	Anniston and Allen gravelly loams, 10 to 15 percent slopes, eroded
AcE2	Anniston and Allen gravelly loams, 15 to 25 percent slopes, eroded
ACGIH	American Conference of Governmental Industrial Hygienists
AdE	Anniston and Allen stony loam, 10 to 25 percent slope
ADEM	Alabama Department of Environmental Management
ADPH	Alabama Department of Public Health
AEC	U.S. Army Environmental Center
AEL	airborne exposure limit
AET	adverse effect threshold
AF	soil-to-skin adherence factor
AHA	ammunition holding area
AL	Alabama
ALAD	-aminolevulinic acid dehydratase
amb.	Amber
amsl	above mean sea level
ANAD	Anniston Army Depot
AOC	area of concern
APEC	areas of potential ecological concern
APT	armor-piercing tracer
AR	analysis request
ARAR	applicable or relevant and appropriate requirement
AREE	area requiring environmental evaluation
ASP	Ammunition Supply Point
ASR	Archives Search Report
AST	aboveground storage tank
ASTM	American Society for Testing and Materials
AT	averaging time
ATSDR	Agency for Toxic Substances and Disease Registry
ATV	all-terrain vehicle
AWARE	Associated Water and Air Resources Engineers, Inc.
AWWSB	Anniston Water Works and Sewer Board
‘B’	Analyte detected in laboratory or field blank at concentration greater than the reporting limit (and greater than zero)
BCF	blank correction factor; bioconcentration factor

BCT	BRAC Cleanup Team
BERA	baseline ecological risk assessment
BEHP	bis(2-ethylhexyl)phthalate
BFB	bromofluorobenzene
BFE	base flood elevation
BG	Bacillus globigii
bgs	below ground surface
BHC	betahexachlorocyclohexane
BHHRA	baseline human health risk assessment
BIRTC	Branch Immaterial Replacement Training Center
bkg	background
bls	below land surface
BOD	biological oxygen demand
Bp	soil-to-plant biotransfer factors
BRAC	Base Realignment and Closure
Braun	Braun Intertec Corporation
BSAF	biota-to-sediment accumulation factors
BSC	background screening criterion
BTAG	Biological Technical Assistance Group
BTEX	benzene, toluene, ethyl benzene, and xylenes
BTOC	below top of casing
BTV	background threshold value
BW	biological warfare; body weight
BZ	breathing zone; 3-quinuclidinyl benzilate
C	ceiling limit value
Ca	carcinogen
CAB	chemical warfare agent breakdown products
CAMU	corrective action management unit
CBR	chemical, biological and radiological
CCAL	continuing calibration
CCB	continuing calibration blank
CCV	continuing calibration verification
CD	compact disc
CDTF	Chemical Defense Training Facility
CEHNC	U.S. Army Engineering and Support Center, Huntsville
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CERFA	Community Environmental Response Facilitation Act
CESAS	Corps of Engineers South Atlantic Savannah
CF	conversion factor
CFC	chlorofluorocarbon
CFDP	Center for Domestic Preparedness
CFR	Code of Federal Regulations
CG	carbonyl chloride (phosgene)
CGI	combustible gas indicator
ch	inorganic clays of high plasticity
CHPPM	U.S. Army Center for Health Promotion and Preventive Medicine
CK	cyanogen chloride
cl	inorganic clays of low to medium plasticity

Cl.	chlorinated
CLP	Contract Laboratory Program
cm	centimeter
CN	chloroacetophenone
CNB	chloroacetophenone, benzene, and carbon tetrachloride
CNS	chloroacetophenone, chloropicrin, and chloroform
CO	carbon monoxide
Co-60	cobalt-60
CoA	Code of Alabama
COC	chain of custody; contaminant of concern
COE	Corps of Engineers
Con	skin or eye contact
COPC	chemical(s) of potential concern
COPEC	chemical(s) of potential ecological concern
CPSS	chemicals present in site samples
CQCSM	Contract Quality Control System Manager
CRDL	contract-required detection limit
CRL	certified reporting limit
CRQL	contract-required quantitation limit
CRZ	contamination reduction zone
Cs-137	cesium-137
CS	ortho-chlorobenzylidene-malononitrile
CSEM	conceptual site exposure model
CSM	conceptual site model
CT	central tendency
ctr.	container
CWA	chemical warfare agent
CWM	chemical warfare material; clear, wide mouth
CX	dichloroformoxime
‘D’	duplicate; dilution
D&I	detection and identification
DAF	dilution-attenuation factor
DANC	decontamination agent, non-corrosive
°C	degrees Celsius
°F	degrees Fahrenheit
DCE	dichloroethene
DDD	dichlorodiphenyldichloroethane
DDE	dichlorodiphenyldichloroethene
DDT	dichlorodiphenyltrichloroethane
DEH	Directorate of Engineering and Housing
DEP	depositional soil
DFTPP	decafluorotriphenylphosphine
DI	deionized
DID	data item description
DIMP	di-isopropylmethylphosphonate
DM	dry matter
DMBA	dimethylbenz(a)anthracene
DMMP	dimethylmethylphosphonate

List of Abbreviations and Acronyms (Continued)

DOD	U.S. Department of Defense
DOJ	U.S. Department of Justice
DOT	U.S. Department of Transportation
DP	direct-push
DPDO	Defense Property Disposal Office
DPT	direct-push technology
DQO	data quality objective
DRMO	Defense Reutilization and Marketing Office
DRO	diesel range organics
DS	deep (subsurface) soil
DS2	Decontamination Solution Number 2
DWEL	drinking water equivalent level
E&E	Ecology and Environment, Inc.
EB	equipment blank
EBS	environmental baseline survey
EC ₅₀	effects concentration for 50 percent of a population
ECBC	Edgewood Chemical/Biological Command
ED	exposure duration
EDD	electronic data deliverable
EF	exposure frequency
EDQL	ecological data quality level
EE/CA	engineering evaluation and cost analysis
Elev.	elevation
EM	electromagnetic
EMI	Environmental Management Inc.
EM31	Geonics Limited EM31 Terrain Conductivity Meter
EM61	Geonics Limited EM61 High-Resolution Metal Detector
EOD	explosive ordnance disposal
EODT	explosive ordnance disposal team
EPA	U.S. Environmental Protection Agency
EPC	exposure point concentration
EPIC	Environmental Photographic Interpretation Center
EPRI	Electrical Power Research Institute
ER	equipment rinsate
ERA	ecological risk assessment
ER-L	effects range-low
ER-M	effects range-medium
ESE	Environmental Science and Engineering, Inc.
ESMP	Endangered Species Management Plan
ESN	Environmental Services Network, Inc.
ESV	ecological screening value
ET	exposure time
EU	exposure unit
Exp.	explosives
E-W	east to west
EZ	exclusion zone
FAR	Federal Acquisition Regulations
FB	field blank

FD	field duplicate
FDA	U.S. Food and Drug Administration
FedEx	Federal Express, Inc.
FEMA	Federal Emergency Management Agency
FFCA	Federal Facilities Compliance Act
FFE	field flame expedient
FFS	focused feasibility study
FI	fraction of exposure
Fil	filtered
FIt	filtered
FMDC	Fort McClellan Development Commission
FML	flexible membrane liner
FMP 1300	Former Motor Pool 1300
FOMRA	Former Ordnance Motor Repair Area
Foster Wheeler	Foster Wheeler Environmental Corporation
Frtn	fraction
FS	field split; feasibility study
FSP	field sampling plan
ft	feet
ft/ft	feet per foot
FTA	Fire Training Area
FTMC	Fort McClellan
FTRRRA	FTMC Reuse & Redevelopment Authority
g	gram
g/m ³	gram per cubic meter
G-856	Geometrics, Inc. G-856 magnetometer
G-858G	Geometrics, Inc. G-858G magnetic gradiometer
GAF	gastrointestinal absorption factor
gal	gallon
gal/min	gallons per minute
GB	sarin
gc	clay gravels; gravel-sand-clay mixtures
GC	gas chromatograph
GCL	geosynthetic clay liner
GC/MS	gas chromatograph/mass spectrometer
GCR	geosynthetic clay liner
GFAA	graphite furnace atomic absorption
GIS	Geographic Information System
gm	silty gravels; gravel-sand-silt mixtures
gp	poorly graded gravels; gravel-sand mixtures
gpm	gallons per minute
GPR	ground-penetrating radar
GPS	global positioning system
GS	ground scar
GSA	General Services Administration; Geologic Survey of Alabama
GSBP	Ground Scar Boiler Plant
GSSI	Geophysical Survey Systems, Inc.
GST	ground stain

GW	groundwater
gw	well-graded gravels; gravel-sand mixtures
HA	hand auger
HCl	hydrochloric acid
HD	distilled mustard
HDPE	high-density polyethylene
HEAST	Health Effects Assessment Summary Tables
Herb.	herbicides
HHRA	human health risk assessment
HI	hazard index
HPLC	high performance liquid chromatography
HNO ₃	nitric acid
HQ	hazard quotient
HQ _{screen}	screening-level hazard quotient
hr	hour
H&S	health and safety
HSA	hollow-stem auger
HTRW	hazardous, toxic, and radioactive waste
‘I’	out of control, data rejected due to low recovery
IATA	International Air Transport Authority
ICAL	initial calibration
ICB	initial calibration blank
ICP	inductively-coupled plasma
ICRP	International Commission on Radiological Protection
ICS	interference check sample
ID	inside diameter
IDL	instrument detection limit
IDLH	immediately dangerous to life or health
IDM	investigative-derived media
IDW	investigation-derived waste
IEUBK	Integrated Exposure Uptake Biokinetic
IF	ingestion factor; inhalation factor
ILCR	incremental lifetime cancer risk
IMPA	isopropylmethyl phosphonic acid
IMR	Iron Mountain Road
in.	inch
Ing	ingestion
Inh	inhalation
IP	ionization potential
IPS	International Pipe Standard
IR	ingestion rate
IRDMIS	Installation Restoration Data Management Information System
IRIS	Integrated Risk Information Service
IRP	Installation Restoration Program
IS	internal standard
ISCP	Installation Spill Contingency Plan
IT	IT Corporation
ITEMS	IT Environmental Management System™

List of Abbreviations and Acronyms *(Continued)*

‘J’	estimated concentration	MMBtu/hr	million Btu per hour	NRCC	National Research Council of Canada
JeB2	Jefferson gravelly fine sandy loam, 2 to 6 percent slopes, eroded	MOGAS	motor vehicle gasoline	NRHP	National Register of Historic Places
JeC2	Jefferson gravelly fine sandy loam, 6 to 10 percent slopes, eroded	MP	Military Police	ns	nanosecond
JfB	Jefferson stony fine sandy loam, 0 to 10 percent slopes have strong slopes	MPA	methyl phosphonic acid	N-S	north to south
JPA	Joint Powers Authority	MPM	most probable munition	NS	not surveyed
K	conductivity	MQL	method quantitation limit	NSA	New South Associates, Inc.
K _{ow}	octonal-water partition coefficient	MR	molasses residue	nT	nanotesla
L	lewisite; liter	MRL	method reporting limit	nT/m	nanoteslas per meter
l	liter	MS	matrix spike	NTU	nephelometric turbidity unit
LBP	lead-based paint	mS/cm	millisiemens per centimeter	nv	not validated
LC	liquid chromatography	mS/m	millisiemens per meter	O ₂	oxygen
LCS	laboratory control sample	MSD	matrix spike duplicate	O&G	oil and grease
LC ₅₀	lethal concentration for 50 percent population tested	MTBE	methyl tertiary butyl ether	O&M	operation and maintenance
LD ₅₀	lethal dose for 50 percent population tested	msl	mean sea level	OB/OD	open burning/open detonation
LEL	lower explosive limit	MtD3	Montevallo shaly, silty clay loam, 10 to 40 percent slopes , severely eroded	OD	outside diameter
LOAEL	lowest-observed-advserse-effects-level	mV	millivolts	OE	ordnance and explosives
LT	less than the certified reporting limit	MW	monitoring well	oh	organic clays of medium to high plasticity
LUC	land-use control	MWI&P	Monitoring Well Installation and Management Plan	ol	organic silts and organic silty clays of low plasticity
LUCAP	land-use control assurance plan	Na	sodium	OP	organophosphorus
LUCIP	land-use control implementation plan	NA	not applicable; not available	ORP	oxidation-reduction potential
max	maximum	NAD	North American Datum	OSHA	Occupational Safety and Health Administration
MB	method blank	NAD83	North American Datum of 1983	OSWER	Office of Solid Waste and Emergency Response
MCL	maximum contaminant level	NAVD88	North American Vertical Datum of 1988	OVM-PID/FID	organic vapor meter-photoionization detector/flame ionization detector
MCLG	maximum contaminant level goal	NAS	National Academy of Sciences	OVS	oil/water separator
MCPA	4-chloro-2-methylphenoxyacetic acid	NCEA	National Center for Environmental Assessment	oz	ounce
MCS	media cleanup standard	NCP	National Contingency Plan	PA	preliminary assessment
MD	matrix duplicate	NCRP	National Council on Radiation Protection and Measurements	PAH	polynuclear aromatic hydrocarbon
MDC	maximum detected concentration	ND	not detected	PARCCS	precision, accuracy, representativeness, comparability, completeness, and sensitivity
MDCC	maximum detected constituent concentration	NE	no evidence; northeast	Parsons	Parsons Engineering Science, Inc.
MDL	method detection limit	ne	not evaluated	Pb	lead
mg	milligrams	NEW	net explosive weight	PBMS	performance-based measurement system
mg/kg	milligrams per kilogram	NFA	No Further Action	PC	permeability coefficient
mg/kg/day	milligram per kilogram per day	NG	National Guard	PCB	polychlorinated biphenyl
mg/kgbw/day	milligrams per kilogram of body weight per day	NGP	National Guardsperson	PCDD	polychlorinated dibenzo-p-dioxins
mg/L	milligrams per liter	ng/L	nanograms per liter	PCDF	polychlorinated dibenzofurans
mg/m ³	milligrams per cubic meter	NGVD	National Geodetic Vertical Datum	PCE	perchloroethene
mh	inorganic silts, micaceous or diatomaceous fine, sandy or silt soils	Ni	nickel	PCP	pentachlorophenol
MHz	megahertz	NIC	notice of intended change	PDS	Personnel Decontamination Station
µg/g	micrograms per gram	NIOSH	National Institute for Occupational Safety and Health	PEF	particulate emission factor
µg/kg	micrograms per kilogram	NIST	National Institute of Standards and Technology	PEL	permissible exposure limit
µg/L	micrograms per liter	NLM	National Library of Medicine	PES	potential explosive site
µmhos/cm	micromhos per centimeter	NPDES	National Pollutant Discharge Elimination System	Pest.	pesticides
min	minimum	NPW	net present worth	PETN	pentarey thritol tetranitrate
MINICAMS	miniature continuous air monitoring system	No.	number	PFT	portable flamethrower
ml	inorganic silts and very fine sands	NOAA	National Oceanic and Atmospheric Administration	PG	professional geologist
mL	milliliter	NOAEL	no-observed-adverse-effects-level	PID	photoionization detector
mm	millimeter	NR	not requested; not recorded; no risk	PkA	Philo and Stendal soils local alluvium, 0 to 2 percent slopes
MM	mounded material	NRC	National Research Council		

List of Abbreviations and Acronyms (Continued)

PM	project manager	RTECS	Registry of Toxic Effects of Chemical Substances	STEL	short-term exposure limit
POC	point of contact	RTK	real-time kinematic	STL	Severn-Trent Laboratories
POL	petroleum, oils, and lubricants	SA	exposed skin surface area	STOLS	Surface Towed Ordnance Locator System®
POW	prisoner of war	SAD	South Atlantic Division	Std. units	standard units
PP	peristaltic pump; Proposed Plan	SAE	Society of Automotive Engineers	SU	standard unit
ppb	parts per billion	SAIC	Science Applications International Corporation	SUXOS	senior UXO supervisor
PPE	personal protective equipment	SAP	installation-wide sampling and analysis plan	SVOC	semivolatile organic compound
ppm	parts per million	sc	clayey sands; sand-clay mixtures	SW	surface water
PPMP	Print Plant Motor Pool	Sch.	Schedule	SW-846	U.S. EPA’s <i>Test Methods for Evaluating Solid Waste: Physical/Chemical Methods</i>
ppt	parts per thousand	SCM	site conceptual model	SWMU	solid waste management unit
PR	potential risk	SD	sediment	SWPP	storm water pollution prevention plan
PRA	preliminary risk assessment	SDG	sample delivery group	SZ	support zone
PRG	preliminary remediation goal	SDZ	safe distance zone; surface danger zone	TAL	target analyte list
PSSC	potential site-specific chemical	SEMS	Southern Environmental Management & Specialties, Inc.	TAT	turn around time
pt	peat or other highly organic silts	SF	cancer slope factor	TB	trip blank
PVC	polyvinyl chloride	SFSP	site-specific field sampling plan	TBC	to be considered
QA	quality assurance	SGF	standard grade fuels	TCA	trichloroethane
QA/QC	quality assurance/quality control	SHP	installation-wide safety and health plan	TCDD	2,3,7,8-tetrachlorodibenzo-p-dioxin
QAM	quality assurance manual	SI	site investigation	TCDF	tetrachlorodibenzofurans
QAO	quality assurance officer	SINA	Special Interest Natural Area	TCE	trichloroethene
QAP	installation-wide quality assurance plan	SL	standing liquid	TCL	target compound list
QC	quality control	SLERA	screening-level ecological risk assessment	TCLP	toxicity characteristic leaching procedure
QST	QST Environmental, Inc.	sm	silty sands; sand-silt mixtures	TDEC	Tennessee Department of Environment and Conservation
qty	quantity	SM	Serratia marcescens	TDGCL	thiodiglycol
Qual	qualifier	SMDP	Scientific Management Decision Point	TDGCLA	thiodiglycol chloroacetic acid
‘R’	rejected data; resample	s/n	signal-to-noise ratio	TERC	Total Environmental Restoration Contract
R&A	relevant and appropriate	SOP	standard operating procedure	THI	target hazard index
RA	remedial action	SOPQAM	U.S. EPA’s <i>Standard Operating Procedure/Quality Assurance Manual</i>	TIC	tentatively identified compound
RAO	removal action objective	sp	poorly graded sands; gravelly sands	TLV	threshold limit value
RBC	risk-based concentration	SP	submersible pump	TN	Tennessee
RCRA	Resource Conservation and Recovery Act	SPCC	system performance calibration compound	TNT	trinitrotoluene
RD	remedial design	SPCS	State Plane Coordinate System	TOC	top of casing; total organic carbon
RDX	cyclonite	SPM	sample planning module	TPH	total petroleum hydrocarbons
ReB3	Rarden silty clay loams	SQRT	screening quick reference tables	TR	target cancer risk
REG	regular field sample	Sr-90	strontium-90	TRADOC	U.S. Army Training and Doctrine Command
REL	recommended exposure limit	SRA	streamlined human health risk assessment	TRPH	total recoverable petroleum hydrocarbons
RFA	request for analysis	SRM	standard reference material	TSCA	Toxic Substances Control Act
RfC	reference concentration	Ss	stony rough land, sandstone series	TSDF	treatment, storage, and disposal facility
RfD	reference dose	SS	surface soil	TWA	time-weighted average
RGO	remedial goal option	SSC	site-specific chemical	UCL	upper confidence limit
RI	remedial investigation	SSHO	site safety and health officer	UCR	upper certified range
RL	reporting limit	SSHP	site-specific safety and health plan	‘U’	not detected above reporting limit
RME	reasonable maximum exposure	SSL	soil screening level	UF	uncertainty factor
ROD	Record of Decision	SSSL	site-specific screening level	USACE	U.S. Army Corps of Engineers
RPD	relative percent difference	SSSSL	site-specific soil screening level	USACHPPM	U.S. Army Center for Health Promotion and Preventive Medicine
RRF	relative response factor	STB	supertropical bleach	USAEC	U.S. Army Environmental Center
RSD	relative standard deviation	STC	source-term concentration	USAEHA	U.S. Army Environmental Hygiene Agency
RTC	Recruiting Training Center	STD	standard deviation	USACMLS	U.S. Army Chemical School

List of Abbreviations and Acronyms (Continued)

USAMPS	U.S. Army Military Police School
USATCES	U.S. Army Technical Center for Explosive Safety
USATEU	U.S. Army Technical Escort Unit
USATHAMA	U.S. Army Toxic and Hazardous Material Agency
USC	United States Code
USCS	Unified Soil Classification System
USDA	U.S. Department of Agriculture
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
UST	underground storage tank
UTL	upper tolerance level; upper tolerance limit
UXO	unexploded ordnance
UXOQCS	UXO Quality Control Supervisor
UXOSO	UXO safety officer
V	vanadium
VOA	volatile organic analyte
VOC	volatile organic compound
VOH	volatile organic hydrocarbon
VQlfr	validation qualifier
VQual	validation qualifier
VX	nerve agent (O-ethyl-S-[diisopropylaminoethyl]-methylphosphonothiolate)
WAC	Women’s Army Corps
Weston	Roy F. Weston, Inc.
WP	installation-wide work plan
WRS	Wilcoxon rank sum
WS	watershed
WSA	Watershed Screening Assessment
WWI	World War I
WWII	World War II
XRF	x-ray fluorescence
yd ³	cubic yards

- S – Non-target compound analyzed for and detected (GC/MS methods)
- T – Non-target compound analyzed for but not detected (non GC/MS methods)
- U – Analysis in unconfirmed
- Z – Non-target compound analyzed for and detected (non-GC/MS methods)

- Qualifiers
- J – The low-spike recovery is low
 - N – The high-spike recovery is low
 - R – Data is rejected

SAIC – Data Qualifiers, Codes and Footnotes, 1995 Remedial Investigation

N/A – Not analyzed

ND – Not detected

Boolean Codes

- LT – Less than the certified reporting limit

Flagging Codes

- 9 – Non-demonstrated/validated method performed for USAEC
- B – Analyte found in the method blank or QC blank
- C – Analysis was confirmed
- D – Duplicate analysis
- I – Interfaces in sample make quantitation and/or identification to be suspicious
- J – Value is estimated
- K – Reported results are affected by interfaces or high background
- N – Tentatively identified compound (match greater than 70%)
- Q – Sample interference obscured peak of interest
- R – Non-target compound analyzed for but not detected (GC/MS methods)